

JOHANSSON  
Serial No. 09/998,921

Atty Dkt: 2380-566  
Art Unit: 2681

**AMENDMENTS TO THE SPECIFICATION:**

*Please amend the paragraph beginning at page 4 line 18 as follows:*

Space diversity is attained by providing multiple signal paths through simultaneous links from a mobile station through two or more base stations. When the mobile station is in communication with two or more base stations, a single signal for the end user is created from the signals from each base station. As mentioned above, this diversity communication is sometimes referred to as a diversity, "soft" handover in that communication with a destination base station is established before communication with the source base station is terminated. Thus, after a call is initiated and established between a mobile station and a serving base station, the mobile station continues to scan a broadcast signal transmitted by base stations located in neighboring cells. Broadcast signal scanning continues in order to determine if one of the neighboring base station transmitted signals is strong enough for a handover to be initiated. If so, this determination is provided to the radio network which sends the appropriate information to the mobile station and to the new destination base station to initiate the diversity handover. The new base station searches for and finds the mobile station's transmitted signal using the associated spreading code. The destination base station also begins transmitting a downlink signal to the mobile station using the appropriate spreading code. The mobile station searches for this downlink signal and sends a confirmation when it has been received.

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*Please amend the paragraph beginning at page 7 line 14 as follows:*

In a non-limiting example embodiment, the time position estimator uses an average time position at which other mobile stations previously initiated handover from the source base station to the destination base station as the statistical estimate. In an illustrated example embodiment, the time position estimator maintains a filter which calculates a filter output value of the average time position  $T_{\text{new}}$  for the specified mobile station. The filter output value is calculated using the expression  $T_{\text{new}} = a * T_{\text{old}} + (1-a) * T_{\text{last}}$ . In this expression,  $T_{\text{last}}$  is a time position found for a last mobile station which initiated handover from the source base station to the destination base station prior to the specified mobile station;  $T_{\text{old}}$  is an output value of the filter prior to the filter being updated with the time position found for the last mobile station which initiated handover from the source base station to the destination base station prior to the specified mobile station; and  $a$  is a weighting factor

*Please amend the paragraph beginning at page 12 line 16 as follows:*

The start position SP calculated by time position estimator 100 [i.e.,  $T_{\text{last}}, T_{\text{new}}$ ] is a time position (preferably expressed in microseconds) which enables the searcher algorithm of the searcher to know where to commence its evaluation of the received transmission of the mobile station (MS). The start position SP calculated and received from time position estimator 100 enables the searcher S to determine with which of its steps or slots to begin its search. For example, the searcher S can center its search window about the slot corresponding to the start position SP calculated and received from time position estimator 100.

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*Please amend the paragraph beginning at page 14 line 26 as follows:*

Each of the core network service nodes 18 and 20 connects to a UMTS Terrestrial Radio Access Network (UTRAN)-24 over a radio access network (RAN) interface referred to as the Iu interface. UTRAN 24 includes one or more radio network controllers (RNCs) 26. For sake of simplicity, the UTRAN 24 of Fig. 5 is shown with only two RNC nodes, particularly RNC 26<sub>1</sub> and RNC 26<sub>2</sub>. In Fig. 5, for sake of simplicity only one of the RNC nodes 26 is shown with a time position estimator 100 of the present invention. Each RNC 26 is connected to a plurality of base stations (BS) 28. For example, and again for sake of simplicity, two base station nodes are shown connected to each RNC 26. In this regard, RNC 26<sub>1</sub> serves base station 28<sub>1-1</sub> and base station 28<sub>1-2</sub>, while RNC 26<sub>2</sub> serves base station 28<sub>2-1</sub> and base station 28<sub>2-2</sub>. It will be appreciated that a different number of base stations can be served by each RNC, and that RNCs need not serve the same number of base stations. Moreover, Fig. 6 shows that an RNC can be connected over an Iur interface to one or more other RNCs in the UTRAN-24.

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